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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,997	09/30/2003	Thomas C. Sloan	772-27-003	7244
23935	7590	10/02/2006	EXAMINER	
KOPPEL, PATRICK & HEYBL 555 ST. CHARLES DRIVE SUITE 107 THOUSAND OAKS, CA 91360			HAN, JASON	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/676,997	Applicant(s) SLOAN ET AL.	
	Examiner Jason M. Han	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 37-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to Claims 12-15 and 17-25 have been considered but are moot in view of the new ground(s) of rejection, which was necessitated by the amendment.
2. At present, amended Independent Claim 12 does not render patentability over the prior art to Atchinson (U.S. Patent 6,371,637), whereby elucidation is provided below.
3. Applicant's argument, "As shown in FIGS. 1 and 2 of Atchinson, the device 20 comprises a substrate 37 and a housing 22, both of which are described as being formed from flexible material. This material is bendable to conform to a variety of surfaces, but because the material is flexible and will return to its previous state once a bending force is released, it must be coupled with some form of mounting means in order to holds its conforming shape (col. 10, lines 6-21)" [Page 14], is unnecessarily reading too much into the specification, whereby the cited reference does not specifically teach the material being flexible enough that it will return to its previous state and must be coupled to some form of mounting means in order to holds its conforming shape. Atchinson simply teaches, "Since the D-channel housing is flexible, it does not detract from the flexible, conformal nature of a light emitting element array" [Column 10, Lines 15-17], and remains silent on whether the resiliency or flexibility of the housing is such that it must return to its original shape after a bending force is released.

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4. In response to Applicant's argument, "The flexible Atchinson illumination device design is critical because it does not describe a device with a housing made from a rigid material that is capable of being bent into various embodiments that will hold their shape with or without the presence of a bending force. To further distinguish claim 12, it has been amended to that the elongated tube is "rigid" and "impact resistant" [Page 15], it remains obvious that one ordinarily skilled in the art at the time of invention would modify the housing of Atchinson to be made from a rigid material that is capable of being bent and hold shape, as well as being impact resistant. Atchinson corroborates, "It should be understood that even though the housing 22 is illustrated as a flexible, transparent, hollow D-channel tube, its profile properties are immaterial to practice of principles of the invention. In particular, where it is desirable to protect the diode array from the elements or from impact, any form of housing would be generally suitable" [Column 10, Lines 41-46].

5. Applicant's arguments filed July 14, 2006, concerning Independent Claim 26 and corresponding dependent claims, have been fully considered but they are not persuasive.

6. Applicant's primary argument, "Duarte does not disclose, teach or suggest a lighting system capable of dispersing light from the individual LEDs such that the appearance of a continuous light source is effectuated" [Page 16], is inconsistent with the Examiner's interpretation, whereby the prior art of Duarte (U.S. Patent 5,559,681) remains commensurate to the scope of the claim as stated by the Applicant and as broadly construed by the Examiner [MPEP 2111]. To elucidate, Applicant has not

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provided sufficient language or context within the claim to describe "a continuous light source", whereby the Examiner maintains that Duarte clearly discloses a continuous light source being arranged from one end of the elongated transparent tube to the other end.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 16 recites the limitation "wherein said tube further comprises a track and each of said PCBs contains a washer to ride on said track to mount said PCBs within said tube" in Lines 13-16 of the Claim. There is insufficient antecedent basis for this limitation in the claim. At present, Applicant has failed to amend Original Dependent Claim 16 (filed February 13, 2006) to incorporate ALL the limitations from the base claim (e.g., Independent Claim 12), as well as any intervening claims (e.g., Dependent Claims 15, 14, 13). Appropriate correction is required.

The following claims have been construed in light of the specification, but rendered the broadest interpretation as stated by Applicant within the claim language [MPEP 2111].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 26, 28-30, 32-33, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Duarte (U.S. Patent 5,559,681).

10. With regards to Claim 26, Duarte discloses a perimeter light for mounting to a body having straight and curved surfaces including:

- A plurality of straight and bent elongated perimeter light [Figure 6], each of which includes:
 - = An array of light sources [Figure 3; (14)] that are illuminated by an electric power [Figure 2: (18, 24)];
 - = An elongated transparent tube [Figure 3: (30, 42, 44, 46)], whereby the array of light sources are disposed within the tube, said tube transmits and disperses the light from the array giving the appearance that the array of light sources is a continuous light source [Figure 3: (41)];
 - = Said array of light sources being cuttable at intervals to shorten the array while allowing the remaining light sources in the array to emit light, whereby the tube is cuttable to match the length of the array [Figure 1];

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- = Said plurality of perimeter lights electrically coupled in a daisy-chain with the electrical power at each of the plurality of perimeter lights transmitted to the successive of the plurality of perimeter lights [Figure 4; Column 4, Line 66 – Column 5, Line 5]; and
- = An anchoring system [Figure 3: (32-34)] for mounting each of the straight and curved perimeter lights to a structure, each of the plurality of straight perimeter lights anchored to the straight portion of the body and each of the plurality of bent perimeter lights being anchored to a curved portion of the body [Figure 6; Column 1, Lines 5-21].

11. With regards to Claim 28, Duarte discloses each of the array of light sources including an array of light emitting diodes (LEDs) mounted on a substrate [Column 2, Lines 12-13].

12. With regards to Claim 29, Duarte discloses each of the array of LEDs being arranged as a plurality of parallel connected sub-arrays of LEDs, said electric power coupled across each of the plurality of sub-arrays [Figure 7].

13. With regards to Claim 30, Duarte discloses the array of LEDs [Figure 7] being cuttable between two of the plurality of parallel sub-arrays [Figure 1; Column 1, Lines 57-63].

14. With regards to Claim 32, Duarte discloses the array of LEDs being cuttable between two of the serially connected plurality of PCBs to shorten the LED array [Figure 1].

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15. With regards to Claim 33, Duarte discloses the electrical power at each of the plurality of perimeter lights being transmitted to the successive of the plurality of perimeter lights by an electrical conductor, wherein the cutting of the LED array in each perimeter light does not interrupt the transmission of the electrical power between successive said plurality of perimeter lights [Figure 4].

16. With regards to Claim 36, Duarte discloses a voltage/current control device [Figure 7: (110, 112)] at each of the plurality of parallel connected sub-arrays.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 12-14, 17, 19, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson et al. (U.S. Patent 6,371,637).

18. With regards to Claim 12, Atchinson discloses a bent elongated perimeter light including:

- An array of light sources [Figures 1, 4: (32)] that are illuminated by electric power [Column 1, Lines 11-15];
- An elongated tube [Figure 4: (22)] bent to match a curve or shape, whereby the array of light sources are disposed within the tube, further whereby the tube transmits and disperses the light from the array giving the appearance

that the array of light sources is a continuous light source [Column 9, Line 63 – Column 10, Line 5]; and

- Whereby said array of light sources are cuttable at intervals to shorten the array while allowing the remaining light sources in the array to emit light, and the tube being cuttable to match the length of the array [Column 4, Lines 4-8].

Atchinson does not specifically teach the elongated tube being a rigid impact resistant tube.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the elongated tube out of a rigid impact resistant material, in order to provide protection to the array of light sources, whereby it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Atchinson further corroborates the motivation, “In particular, where it is desirable to protect the diode array from the elements or from impact, any form of housing would be generally suitable” [Column 10, Lines 44-46].

19. With regards to Claim 13, Atchinson discloses the array of light sources being an array of light emitting diodes [Column 5, Line 3].

20. With regards to Claim 14, Atchinson discloses the array of LEDs including a plurality of parallel connected sub-arrays of LEDs [Figure 9].

21. With regards to Claim 17, Atchinson discloses the array of LEDs capable of being cut between two of the plurality of parallel connected sub-arrays to shorten the LED array [Column 9, Lines 9-20].

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22. With regards to Claim 19, Atchinson discloses a means for anchoring [Figure 4: (49)] the bent perimeter light to a structure.

23. With regards to Claim 21, Atchinson discloses first and second conductors [Figure 9: (97, 98)] to transmit the electrical power from the input of the LED array to the output for connecting the perimeter light to another device, wherein the cutting of the LED array does not interrupt the conduction of the electrical power along the first and second conductors [Figure 8-9; Column 9, Lines 9-20].

24. With regards to Claim 22, Atchinson discloses the claimed invention as cited above. In addition, Atchinson teaches bumpers/end caps [Column 10, Lines 22-29] mounted at the ends of the tube to protect the LED array, but does not specifically teach the bumpers/end caps being compressible to compensate for the expansion and contraction of the tube and LED array.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the bumpers/end caps out of an elastic material, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, it is considered obvious that one would want to ensure safety of the inside components regardless of expansion or contraction of the tube due to environmental conditions, and thus, use an elastic material for the bumpers/end caps.

25. With regards to Claim 23, Atchinson discloses the linear array of light sources including a linearly aligned array of light emitting diodes (LEDs) mounted on the substrate [Figures 1, 2, 4].

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26. With regards to Claim 24, Atchinson discloses the array of LEDs being mounted to a flexible circuit board material [Figure 4: (37); Column 5, Line 7].

27. With regards to Claim 25, Atchinson discloses a voltage/current control device [Figures 8-9: (95)] at each of the plurality of parallel connected sub-arrays of LEDs.

28. Claims 15 and 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson et al. (U.S. Patent 6371637) as applied to Claim 14 and 12, respectively above, and further in view of Alexanderson et al. (U.S. Patent 6871981).

29. With regards to Claim 15, Atchinson discloses the claimed invention as cited above, but does not specifically teach a plurality of printed circuit boards, wherein each of the plurality of parallel connected LED sub-arrays is mounted to a respective one of the PCBs, whereby each of the PCBs is electrically connected in series such that an electrical signal applied to the series is transmitted to the PCBs.

Alexanderson teaches a plurality of printed circuit boards [Figures 4, 6: (400)], wherein each of a plurality of parallel connected LED sub-arrays [Figures 4, 6: (402)] is mounted to a respective one of the PCBs [Figure 10], whereby each of the PCBs is electrically connected in series such that an electrical signal applied to the series is transmitted to the PCBs [Column 6, Lines 23-24].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Atchinson to incorporate the plurality of circuit boards, with LED sub-arrays mounted thereon, in serial connection with one another, as taught by Alexanderson, in order to provide a simple, attachable/detachable

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lighting unit that may increase/decrease overall illumination according to a user's preference.

30. With regards to Claim 18, Atchinson in view of Alexanderson discloses the claimed invention as cited above. In addition, Atchinson teaches the array of LEDs capable of being cut between two of the connected plurality of PCBs to shorten the LED array [Column 9, Lines 9-20].

31. With regards to Claim 20, Atchinson discloses the claimed invention as cited above, but does not specifically teach an anchoring slot integral with the perimeter light and a plurality of mounting buttons, whereby the mounting buttons are mounted to a structure and cooperating with the slot to hold the perimeter light on the structure.

Alexanderson teaches an anchoring slot integral [Figure 5: (504)] with the perimeter light and a plurality of mounting buttons [Figure 5: note the screw; Column 6, Lines 63-65 for a plurality], whereby the mounting buttons are mounted to a structure and cooperate with the slot to hold the perimeter light on the structure.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Atchinson to incorporate the mounting bracket of Alexanderson in order to provide a more secure and permanent support for the device on a structure.

32. Claims 27, 31, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duarte (U.S. Patent 5,559,681) as applied to Claim 26 above, and further in view of Alexanderson et al. (U.S. Patent 6,871,981).

33. With regards to Claim 27, Duarte discloses the claimed invention as cited above, but does not specifically teach the anchoring system including a longitudinal anchoring track running along the tube and a plurality of anchoring buttons mounted to the structure, and further including an anchoring slot integral with each of the perimeter lights, whereby the anchoring track of each of the perimeter lights is capable of mating to the anchoring buttons.

Alexanderson teaches an anchoring track [Figure 5: (504)] on the side of the perimeter light and a plurality of anchoring buttons [Figure 5: note the screw; Column 6, Lines 63-65 for a plurality], and further including an anchoring slot [Figure 5: proximate (306)] integral with each of the perimeter lights, whereby the anchoring buttons are mounted to a structure and mate with the track to hold the perimeter light on the structure.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Duarte to incorporate the mounting bracket of Alexanderson in order to provide a more secure and permanent support for the device on a structure.

34. With regards to Claim 31, Duarte discloses the claimed invention as cited above, but does not specifically teach a plurality of printed circuit boards, wherein each of the plurality of parallel connected LED sub-arrays is mounted to a respective one of the PCBs, whereby each of the PCBs is electrically connected in series such that an electrical signal applied to the series is transmitted to the PCBs.

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Alexanderson teaches a plurality of printed circuit boards [Figures 4, 6: (400)], wherein each of a plurality of parallel connected LED sub-arrays [Figures 4, 6: (402)] is mounted to a respective one of the PCBs [Figure 10], whereby each of the PCBs is electrically connected in series such that an electrical signal applied to the series is transmitted to the PCBs [Column 6, Lines 23-24].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Duarte to incorporate the plurality of circuit boards, with LED sub-arrays mounted thereon, in serial connection with one another, as taught by Alexanderson, in order to provide a simple, attachable/detachable lighting unit that may increase/decrease overall illumination in an area according to a user's preference.

35. With regards to Claim 35, Duarte discloses the claimed invention as cited above, but does not specifically teach the array of light sources being mounted to a flexible circuit board material.

Alexanderson teaches mounting an array of light sources [Figures 4, 6: (402)] to a flexible circuit board material [Figures 4, 6: (400); Column 4, Line 24].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Duarte to mount the array of light sources to a flexible circuit board, as taught by Alexanderson, in order to provide support and simplify manufacturing by disposing the electrical components of the device onto said flexible circuit board.

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36. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duarte (U.S. Patent 5,559,681).

Duarte discloses the claimed invention as cited above. In addition, Duarte teaches bumpers/end caps [Figure 2: (22)] mounted at the ends of the tube to protect the LED array, but does not specifically teach the bumpers/end caps being compressible to compensate for the expansion and contraction of the tube and LED array.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the bumpers/end caps out of an elastic material, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, it is considered obvious that one would want to ensure safety of the inside components regardless of expansion or contraction of the tube due to environmental conditions, and thus, use an elastic material for the bumpers/end caps.

Allowable Subject Matter

37. Claim 16 would be allowable if amended to overcome the informal matters addressed above in the 112, 2nd Paragraph Rejection.

38. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

39. The following is a statement of reasons for the indication of allowable subject matter: The Applicant has sufficiently claimed and recited the tube to include a track,

whereby each of the PCBs contains a washer to ride on the track to mount the PCBs within the tube. The prior art of record fails to teach or suggest the combination of structural elements claimed herein, specifically each PCB having a washer to ride on a track so as to mount said PCBs within a tube.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

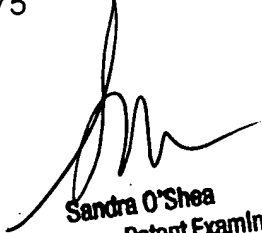
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason M Han
Examiner
Art Unit 2875

JMH (9/27/2006)



Sandra O'Shea
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